

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A method for ~~generating recommendations over a computer network~~, comprising:
collecting, by at least one computer, user events of a first and a second user across a plurality of different application domains in a database, wherein each of the user events is at least in part defined by one or more user event parameters, the one or more user event parameters comprising an application domain parameter identifying one of the different application domains generating the user event, and wherein the event parameters are automatically updated;
receiving, by at least one computer, a triggering event for recommendations, each of the recommendations being associated with at least one of the different application domains of the plurality and the triggering event having associated information indicating one or more of the different application domains of the plurality;
analyzing, by at least one computer, the user events to formulate at least one correlation between at least two user events in the database, wherein the at least two user events are from at least two of the different application domains of the plurality of domains; and
generating, by at least one computer, the recommendations in response to the triggering event in accordance with the application domain of each respective recommendation, the information associated with the triggering event and the at least one correlation between the at least two user events in the database.
2. (Currently Amended) The method of claim 1, wherein collecting user events comprises:
receiving a user event from the plurality of different application domains;
validating the user event parameters in accordance with a predetermined set of rules;
if the user event fails to meet one of the predetermined set of rules, rejecting the user

- event; and
- if the user event meets the predetermined set of rules, storing the user event in the database.
3. (Original) The method of claim 2, wherein validating a particular user event parameter comprises:
- if the particular user event parameter exists in the database, continue validating another user event parameter until all user event parameters are validated; and
- if the particular user event parameter does not exist in the database, checking whether a predefined dynamic updating configuration corresponding to the particular user event parameter is enabled;
- if the dynamic updating configuration corresponding to the particular user event parameter is enabled, adding the particular user event parameter to the database;
- and
- if the dynamic updating configuration corresponding to the particular user event parameter is not enabled, rejecting the user event.
4. (Currently Amended) The method of claim 2, wherein validating the user event parameters comprises:
- validating the user event application domain;
- validating the user event type;
- validating the user event value;
- validating the user event item; and
- validating the user identifier.
5. (Previously Presented) The method of claim 1, wherein analyzing the user events comprises:
- applying a collaborative filter on the user events to compute correlation values between the user events; and

storing the correlation values in a similarity database.

6. (Currently Amended) The method of claim 1 further comprising:
receiving, by the at least one computer, a request for recommending similar items; and
generating, by the at least one computer, recommendations of similar items in accordance
with the at least one correlation between the at least two user events in the
database.
7. (Currently Amended) The method of claim 6 further comprising generating, by the at
least one computer, recommendations of similar items in accordance with a priority
scheme.
8. (Currently Amended) The method of claim 6, wherein generating recommendations of
similar items comprises:
validating the request, wherein the request includes a set of predefined parameters, the set
of predefined parameters including a source domain parameter indicating which
of the plurality of different application domains to select recommendations;
if the source domain[[s]] parameter indicates that the recommendations are to be selected
from fewer than all of the plurality of application domains are specified,
generating a first list of recommendations in accordance with the at least one of
the plurality of different application source domains specified by the source
domain parameter; and
if the source domain[[s]] parameter indicates that the recommendations are to be selected
in accordance with all available application domains in the database are not
specified, generating the first list of recommendations in accordance with all
available application domains of the plurality in the database.

9. (Original) The method of claim 8, wherein generating the first list of recommendations comprises:
- if the first list of recommendations is less than or equal to a predefined minimum number of items, returning the first list of recommendations; and
 - if the first list of recommendations is greater than the predefined minimum number of items, improving the first list of recommendations in accordance with correlation values and the set of predefined parameters.
10. (Original) The method of claim 9, wherein improving the first list of recommendations comprises:
- forming a second list of recommendations from items of the first list of recommendations having a correlation value at or above a predefined threshold;
 - if the second list of recommendations is less than or equal to the predefined minimum number of items, selecting a third list of recommendations comprising the minimum number of items prioritized according to correlation value from items of the first list of recommendations and returning the third list of recommendations; and
 - if the second list of recommendations is greater than the predefined minimum number of items, improving the second list of recommendations in accordance with the correlation values and the set of predefined parameters.
11. (Currently Amended) The method of claim 10, wherein improving the second list of recommendations comprises:
- if the second list of recommendations is less than or equal to a predefined maximum number of items, returning the second list of recommendations; and
 - if the second list of recommendations generated is greater than the predefined maximum number of items, further improving the second list of recommendations in accordance with the predefined source domain[[s]] ~~parameter in the request~~.

12. (Currently Amended) The method of claim 11, wherein the step of further improving the second list of recommendations comprises:
- separating the second list of recommendations into a plurality of groups by application domain in accordance with the predefined source domain[[s]] parameter and a respective application domain parameter associated with each recommendation;
- (a) traversing each group one at a time, selecting a recommendation from the group, the selected recommendation having the highest correlation value relative to other recommendations in the group to form a fourth list of recommendations;
- (b) repeating step (a) until the fourth list of recommendations equal to the predefined maximum number of items; and
- returning the fourth list of recommendations.
13. (Currently Amended) The method of claim 1 further comprising:
- receiving, by the at least one computer, a request for recommending personalized items;
- and
- generating, by the at least one computer, personalized recommendations in accordance with the at least one correlation between the at least two user events in the database.
14. (Currently Amended) The method of claim 13, wherein generating the personalized recommendations comprises:
- validating the request, wherein the request includes a set of predefined parameters, the set of predefined parameters including a predefined threshold;
- retrieving a first list of items the user shown preference from the database, wherein each item has a correlation value greater than or equal to the [[a]] predefined threshold;
- (a) creating a set of recommendations of similar items for each item the user has shown preference;
- (b) storing the set of recommendations of similar items into a first list of recommendations; and

(c) repeating steps (a) and (b) until all members of the first list of items are traversed; and refining the first list of recommendations in accordance with the correlation values and the [[a]] set of predefined parameters.

15. (Currently Amended) The method of claim 14, wherein refining the first list of recommendations comprises:

if the first list of recommendations is less than or equal to a [[the]] predefined minimum number of items, the predefined minimum being specified by a parameter in the set of predefined parameters, returning the first list of recommendations; and
if the first list of recommendations is greater than the predefined minimum number of items, improving the first list of recommendations in accordance with the correlation values and the set of predefined parameters.

16. (Currently Amended) The method of claim 15, wherein improving the first list of recommendations comprises:

forming a second list of recommendations from items of the first list of recommendations having a correlation value at or above the [[a]] predefined threshold;
if the second list of recommendations is less than or equal to the predefined minimum number of items, selecting a third list of recommendations comprising the minimum number of items prioritized according to correlation value from items of the first list of recommendations and returning the third list of recommendations;
if the second list of recommendations is greater than the predefined minimum number of items, improving the second list of recommendations in accordance with the correlation values and the set of predefined parameters.

17. (Currently Amended) The method of claim 16, wherein improving the second list of recommendations comprises:

if the second list of recommendations is less than or equal to a predefined maximum number of items, returning the second list of recommendations; and

if the second list of recommendations generated is greater than the predefined maximum number of items, further improving the second list of recommendations in accordance with a the predefined source domain[[s]] parameter included in the request set of predefined parameters, the source domain parameter indicating which of the plurality of different application domains to select recommendations.

18. (Currently Amended) The method of claim 17, wherein the step of further improving comprises:

separating the second list of recommendations into a plurality of groups by application domain in accordance with the ~~predefined~~ source domain[[s]] parameter and a respective application domain parameter associated with each recommendation;

(a) traversing each group one at a time, selecting a recommendation from the group, the selected recommendation having the highest correlation value relative to other recommendations in the group to form a fourth list of recommendations;

(b) repeating step (a) until the fourth list of recommendations equal to the predefined maximum number of items; and

returning the fourth list of recommendations.

19. (Currently Amended) A system comprising:

a plurality of domain servers for handling user events via the Internet;

a database for storing the user events of a first and a second user; and

a recommendation engine including one or more computer programs containing instructions for:

collecting the user events of the first and the second user across a plurality of different application domains in the database, wherein each of the user events is at least in part defined by one or more user event parameters, the one or more user event parameters comprising an application domain parameter identifying one of the different application domains generating the user event, and wherein the event parameters are automatically

updated;

receiving a triggering event for recommendation, each of the recommendations being associated with at least one of the different application domains of the plurality and the triggering event having associated information indicating one or more of the different application domains of the plurality;

analyzing the user events to formulate at least one correlation between at least two user events in the database, wherein the at least two user events are from at least two of the different application domains of the plurality of domains; and

generating recommendations in response to the triggering event in accordance with the application domain of each respective recommendation, the information associated with the triggering event and the at least one correlation between the at least two user events in the database.

20. (Currently Amended) The system of claim 19, wherein the instructions for collecting user events comprise instructions for:
- receiving a user event from the plurality of the different application domains;
 - validating the user event parameters in accordance with a predetermined set of rules;
 - if the user event fails to meet one of the predetermined set of rules, rejecting the user; and
 - if the user event meets the predetermined set of rules, storing the user event in the database.
21. (Original) The system of claim 20, wherein the instructions for validating a particular user event parameter comprise instructions for:
- if the particular user event parameter exists in the database, continue validating another user event parameter until all user event parameters are validated; and
 - if the particular user event parameter does not exist in the database, checking whether a predefined dynamic updating configuration corresponding to the particular user

- event parameter is enabled;
if the dynamic updating configuration corresponding to the particular user event
parameter is enabled, adding the particular user event parameter to the database;
and
if the dynamic updating configuration corresponding to the particular user event
parameter is not enabled, rejecting the user event.
22. (Currently Amended) The system of claim 20, wherein the instructions for validating the user event parameters comprise instructions for:
validating the user event application domain;
validating the user event type;
validating the user event value;
validating the user event item; and
validating the user identifier.
23. (Original) The system of claim 19, wherein the instructions for analyzing the user events comprise instructions for:
applying a collaborative filter on the user events to compute correlation values between
the user events; and
storing the correlation values in a similarity database.
24. (Previously Presented) The system of claim 19, the computer programs of the recommendation engine further comprising instructions for:
receiving a request for recommending similar items; and
generating recommendations of similar items in accordance with the at least one
correlation between the at least two user events in the database.
25. (Original) The system of claim 24 further comprising instructions for generating recommendations of similar items in accordance with a priority scheme.

26. (Original) The system of claim 24, wherein the instructions for generating recommendations of similar items comprise instructions for:
validating the request, wherein the request includes a set of predefined parameters, the set of predefined parameters including a source domain parameter indicating which of the plurality of different application domains to select recommendations;
if source domain[[s]] parameter indicates that the recommendations are to be selected from fewer than all of the plurality of application domains are specified,
generating a first list of recommendations in accordance with the at least one of the plurality of different application source domains specified by the source domain parameter; and
if the source domain[[s]] parameter indicates that the recommendations are to be selected in accordance with all available application domains in the database are not specified, generating the first list of recommendations in accordance with all available application domains of the plurality in the database.
27. (Original) The system of claim 26, wherein the instructions for generating the first list of recommendations comprise instructions for:
if the first list of recommendations is less than or equal to a predefined minimum number of items, returning the first list of recommendations; and
if the first list of recommendations is greater than the predefined minimum number of items, improving the first list of recommendations in accordance with correlation values and the set of predefined parameters.
28. (Original) The system of claim 27, wherein the instructions for improving the first list of recommendations comprise instructions for:
forming a second list of recommendations from items of the first list of recommendations having a correlation value above a predefined threshold;
if the second list of recommendations is less than or equal to the predefined minimum

number of items, selecting a third list of recommendations comprising the minimum number of items prioritized according to correlation value from items of the first list of recommendations and returning the third list of recommendations; if the second list of recommendations is greater than the predefined minimum number of items, improving the second list of recommendations in accordance with the correlation values and the set of predefined parameters.

29. (Currently Amended) The system of claim 28, wherein the instructions for improving the second list of recommendations comprise instructions for:

if the second list of recommendations is less than or equal to a predefined maximum number of items, returning the second list of recommendations; and

if the second list of recommendations generated is greater than the predefined maximum number of items, further improving the second list of recommendations in accordance with the ~~predefined~~ source domain[[s]] ~~parameter in the database~~.

30. (Currently Amended) The system of claim 29, wherein the instructions for further improving the second list of recommendations comprise instructions for:

separating the second list of recommendations into a plurality of groups by application domain in accordance with the ~~predefined~~ source domain[[s]] parameter and a respective application domain parameter associated with each recommendation;

(a) traversing each group one at a time, selecting a recommendation from the group, the selected recommendation having the highest correlation value relative to other recommendations in the group to form a fourth list of recommendations;

(b) repeating step (a) until the fourth list of recommendations equal to the predefined maximum number of items; and
returning the fourth list of recommendations.

31. (Previously Presented) The system of claim 19, the computer programs of the recommendation engine further comprising instructions for:
receiving a request for recommending personalized items; and
generating personalized recommendations in accordance with the at least one correlation between the at least two user events in the database.
32. (Currently Amended) The system of claim 31, wherein the instructions for generating the personalized recommendations comprise instructions for:
validating the request, wherein the request includes a set of predefined parameters, the set of predefined parameters including a predefined threshold;
retrieving a first list of items the user has shown preference from the database, wherein each item has a correlation value greater than or equal to the [[a]] predefined threshold;
(a) creating a set of recommendations of similar items for each item the user has shown preference;
(b) storing the set of recommendations of similar items into a first list of recommendations; and
(c) repeating steps (a) and (b) until all members of the first list of items are traversed;
and
refining the first list of recommendations in accordance with the correlation values and the [[a]] set of predefined parameters.
33. (Currently Amended) The system of claim 32, wherein instructions for refining the first list of recommendations comprise instructions for:
if the first list of recommendations is less than or equal to a [[the]] predefined minimum number of items, the predefined minimum being specified by a parameter in the set of predefined parameters, returning the first list of recommendations; and
if the first list of recommendations is greater than the predefined minimum number of items, improving the first list of recommendations in accordance with the

correlation values and the set of predefined parameters.

34. (Currently Amended) The system of claim 33, wherein instructions for improving the first list of recommendations comprise instructions for:
forming a second list of recommendations from items of the first list of recommendations
having a correlation value above the ~~[[a]]~~ predefined threshold;
if the second list of recommendations is less than or equal to the predefined minimum number of items, selecting a third list of recommendations comprising the minimum number of items prioritized according to correlation value from items of the first list of recommendations and returning the third list of recommendations;
if the second list of recommendations is greater than the predefined minimum number of items, improving the second list of recommendations in accordance with the correlation values and the set of predefined parameters.
35. (Currently Amended) The system of claim 34, wherein instructions for improving the second list of recommendations comprise instructions for:
if the second list of recommendations is less than or equal to a predefined maximum number of items, returning the second list of recommendations; and
if the second list of recommendations generated is greater than the predefined maximum number of items, further improving the second list of recommendations in accordance with a the predefined source domain[[s]] parameter included in the request set of predefined parameters, the source domain parameter indicating which of the plurality of different application domains to select recommendations.
36. (Currently Amended) The system of claim 35, wherein the instructions for further improving comprise instructions for:
separating the second list of recommendations into a plurality of groups by application domain in accordance with the ~~predefined~~ source domain[[s]] parameter and a respective application domain parameter associated with each recommendation;

- (a) traversing each group one at a time, selecting a recommendation from the group, the selected recommendation having the highest correlation value relative to other recommendations in the group to form a fourth list of recommendations;
 - (b) repeating step (a) until the fourth list of recommendations equal to the predefined maximum number of items; and
- returning the fourth list of recommendations.
37. (Currently Amended) A computer program product, comprising a storage medium tangibly storing computer programs for executing by one or more computer systems, the computer program comprising:
- a recommendation module for generating recommendations across multiple product or service domains, wherein the recommendation module is used in conjunction with at least a processing unit, a user interface, and a database, and the recommendation module includes one or more computer programs containing instructions for:
- collecting user events of a first and a second user across a plurality of different application domains in the database, wherein each of the user events is at least in part defined by one or more user event parameters, the one or more user event parameters comprising an application domain parameter identifying one of the different application domains generating the user event, and wherein the event parameters are automatically updated;
- receiving a triggering event for recommendations, each of the recommendations being associated with at least one of the different application domains of the plurality and the triggering event having associated information indicating one or more of the different application domains of the plurality;
- analyzing the user events to formulate at least one correlation between at least two user events in the database, wherein the at least two user events are from at least two of the different application domains of the plurality of domains;

and
generating recommendations in response to the triggering event in accordance
with the application domain of each respective recommendation, the
information associated with the triggering event and the at least one
correlation between the at least two user events in the database.